

Exemption No. 5704A

**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

Dornier Luftfahrt GmbH

Regulatory Docket No. 27157

for an exemption from § 25.562(b)(2)
of the Federal Aviation Regulations □

PARTIAL GRANT OF EXEMPTION

By letter LREZ-221/94 dated March 18, 1994, Messers Krause and Gritzbach, Dornier Luftfahrt GmbH, 88039 Friedrichshafen, Federal Republic of Germany, petitioned for a time extension to Exemption No. 5704 from the floor distortion test requirements of § 25.562(b)(2) of the Federal Aviation Regulations (FAR), for captain's and first officer's seats in Dornier Model 328 airplanes, which expires on June 30, 1994.

Sections of the FAR affected:

Section 25.562(b)(2), as amended by Amendment 25-64, in prescribing the conditions under which seats must be tested, requires in pertinent part that where floor rails or floor fittings are used to attach the seating devices to the test fixture, the rails or fittings must be misaligned with respect to the adjacent set of rails or fittings by at least ten degrees vertically (i.e., out of parallel) with one rolled ten degrees.

The petitioner's supportive information is as follows:

"Dornier Luftfahrt is submitting a petition for extension of the partial exemption granted in Exemption No. 5704 until June 30, 1994 from the floor distortion test requirement of FAR 25.582 (b)(2) for captain's and first officer's seats.

ANM-94-016-E

"1. Granting the extension of the embodiment date until Dec.31, 1994 would be in the public interest because the safety standard of the seats concerned is equivalent to nearly all existing airplanes in service.

"2. Granting an extension of the temporary exemption will not impede on going development of a technically and economically viable solution.

"3. Dornier is working together with the seat supplier closely, to undertake development of an improved design to achieve required behaviour of the seat/track interface.

"4. When a technical and practical solution is available, it will be implemented in Dornier 328 production and will be retrofitted in previously delivered aircraft as soon as possible. Dornier will also initiate work with the airlines regarding retrofit of Dornier 328 aircraft already delivered.

"5. Until implementation of a new design, the safety standard of the seats concerned is equivalent to pilot seats in nearly all existing airplanes."

"Dornier and IPECO have conducted a review of activities remaining to meet the 30th June 1994 time limit in which all existing crew seats part numbers 3A165-0007-01-1 and 3A165-0008-01-1 need to be modified with respect to their ability to withstand floor deformation.

"Some twelve tests have been performed during this investigation in which the behaviour characteristics of the seats during floor deformation have been noted for a variety of configurations. In addition to these, a potential design solution to the problems encountered gave a good response when tested statically but met with only partial success during dynamic testing.

"Experience obtained by our subcontractor in the development of the seat for the SAAB 2000 aircraft has been utilised but because of the different track/seat relationship (geometry) of that for the Dornier 328 aircraft, a mechanism substantially different to that of the SAAB seat needs to be designed.

"A second dynamic development test is expected to occur during early April and we are reasonably confident that the mechanism now designed for that seat will perform satisfactorily.

"If a successful development test is achieved, in early April, there will only be 3 months available for the following activities:

- (i) Approval of certification test plan
- (ii) Manufacture of test hardware

- (iii) Static certification tests
- (iv) Dynamic certification tests
- (v) Writing of a test report
- (vi) Approval of test report
- (vii) Manufacture of mod kits
- (viii) Modification/Retrofit of existing seats

"We believe these remaining tasks to be very difficult to achieve/accomplish in the available time."

The FAA finds, for good cause, that action on this petition should not be delayed by publication and comment procedures because the grant of this petition would not set a precedent in this matter in that it only involves an extension of the compliance time of an existing exemption.

The FAA's analysis/summary is as follows:

The FAA issued Exemption No. 5704 to the petitioner on July 30, 1993, in response to a failure to observe the floor distortion test requirements defined by the certification basis for the Dornier Model 328 airplane, and in recognition of some confusion regarding the FAA's intended application of those requirements. The exemption was granted until June 30, 1994, to give the petitioner sufficient time to develop and retrofit, as required, the required installation. The grant was conditioned, in part, on receipt within one month of issuance, a commitment by Dornier to complete testing in a timely manner. Although Dornier did not respond to those terms until November 18, 1993, and preliminary design development work did not commence until approximately mid-October of 1993, it is apparent from the information provided above in this petition, as well as in other supporting information, that the petitioner is progressing toward a satisfactory compliance with the noted requirement.

In consideration of the foregoing, I find that a partial grant of exemption is in the public interest, and will not significantly affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), the petition of Dornier Luftfahrt for exemption from the floor distortion test requirements of § 25.562(b)(2) of the FAR, for captain's and first officer's seats on Dornier Model 328 airplanes, is granted through December 31, 1994.

Other provisions of Exemption No. 5704, together with its conditions and limitations, remain the same and are applicable to this exemption. This amendment is part of, and shall remain attached to, Exemption No. 5704.

Issued in Renton, Washington, on

Transport Airplane Directorate
Aircraft Certification Service